

With a robust, subcylindrical body up to 12 mm in length, *D. inexpectatus* ranks among the largest of Nearctic eucnemids. That it has been captured so seldom, and not at all in intensely sampled areas like eastern South Carolina (Kirk, 1969), suggests that either the species has very low population densities, occupies a niche not accessed by traditional collecting techniques, or has an extremely short period of adult activity. Maybe all three factors are operational in the case of this beetle.

Although eucnemids are considered by Muona (2000) to be “primitive polyphagan beetles”, they share with elaterids the thoracic modifications for projecting the body upward (“the click mechanism”) and various other character systems have become highly derived in some genera. *Dendrocharis* is strikingly distinctive from all other local genera of the family in several respects, most of which appear to suggest a cryptic, but not fossorial, life-style. The following features are noteworthy:

a. The eyes are small, and along with the broadly separated antennal sockets, set low on the front of the head (Fig. 1) with a deep round cavity centered in the interocular space.

b. The anterolateral region of the prothorax is distinctly lobed anteriorly, partly covering the eyes (Fig. 2).

c. The dorsolateral antennal groove is “closed” posteriorly, and remarkably deep, extending dorsad beneath the surface of the pronotum almost 1/3rd of the distance to the middorsal line.

d. The protibiae are broadened and deeply concave on the posterior face, forming a cavity into which the protarsomeres are hinged and held out of sight (Fig. 3); the profemora also are partially concave to accommodate the flexed tibiae, the two conjointly fitting into a deep groove on the posterolateral edge of prothorax.

e. The basal protarsomere is enlarged distally, with four distinct dentations along its ventral edge (Fig. 4), protarsomeres 2-4 are produced apically into narrow lamellae, finely pubescent on the ventral side.

f. The fifth metatarsomere is as long as the basal four combined, relatively much longer than in other genera.

g. The metasterna are unusually long and broad, each with a deep, narrow, sharp-edged groove (Fig. 5) which accommodates mesotarsi when the mesotibiae are reflexed into a shallow groove on the rear surface of the mesofemora.

Specimens of *Dendrocharis* cannot be identified in the key to genera in Muona’s revision (2000: 10), owing to the contrast in couplet 8 “Abdomen with tarsal grooves” (leading to *Dendrocharini*) versus

“Abdomen without tarsal grooves” (setting off genera in the tribes Eucnemini and Mesogenini). In actuality, there are no grooves on the abdominal sterna in *Dendrocharis*, specimens of which would therefore be carried on to an unresolvable limbo in one of the two tribes mentioned. Couplet 8 could be reworded to set off *Dendrocharis* by the presence of prominent deep grooves in the unusually large *metathoracic* sterna, not present in species of Eucnemini and Mesogenini. Changing the term “abdominal tarsal grooves” to “metathoracic sternal tarsal grooves” would correct the diagnostic statements for both tribe and genus on page 59.

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I am very grateful to Dr. Jyrki Muona (Helsinki) for identifying the species and confirming the inadvertent statements in his revision about the presence of grooves on the abdominal sterna. That this beetle can be recorded for Virginia is due to the proficiency of Robert Vigneault (Oka, Ontario), *collecteur extraordinaire*.

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PREDATION STALEMATE: RED-TAILED HAWK (*BUTEO JAMAICENSIS*) VERSUS EASTERN RATSNAKE (*PANTHEROPHIS ALLEGHANIENSIS*).- Raptor predation on snakes has been well documented in the avian and herpetological literature (e.g., Guthrie, 1932; Fitch et al., 1946; Knight & Erickson, 1976; Brugger, 1989; Palmer & Braswell, 1995; Greene, 1997). Ernst (1992) and Ernst & Ernst (2003) noted 50 species of snakes in North America that had been killed

by raptors. Only three species of snakes (*Agkistrodon contortrix*, *Pantherophis [Elaphe] alleghaniensis*, and *Nerodia erythrogaster*) have been documented as prey of hawks in the Virginia literature (Tupacz, 1985; Mitchell, 1994). We report here an observation of attempted predation by a raptor on a ratsnake in which the outcome did not result in death of the snake.

One of us (Fischer) observed such an encounter between a one year-old Red-tailed Hawk (*Buteo jamaicensis*) and an adult Eastern Ratsnake (*Pantherophis alleghaniensis*) on 6 March 2008 at the Norfolk Botanical Garden (NBG), Norfolk, Virginia. Her attention was drawn to a small clearing by a number of birds flying and diving at a hawk on the ground. The hawk's left wing was stretched out because the snake was wrapped around both of the hawk's legs and part of its body, and was pulling the hawk off balance. Both remained motionless while being photographed (Fig. 1). Fischer moved away to minimize disturbance and returned 36 min later to find that the snake had coiled itself around the hawk's neck and shoulder. The hawk had injured the snake behind its right jaw from which blood was dripping. Two NBG staff members arrived at that time and worked to release the hawk from the snake. The hawk was untangled and flew away, apparently uninjured. The snake was also released, apparently unharmed except for the injury to its head. During the attempted predation by the hawk, the snake was able to wrap itself around the predator enough to immobilize it and keep it from causing serious injury and death. Release of the

hawk from the snake by NBG staff prevented us from knowing whether the snake would have eventually been killed or if the hawk would have been constricted and killed.

Although predatory strikes on snakes by hawks are usually fatal to the snake, some predation attempts result in fatality or immobilization of the predator instead of the intended prey. Several publications substantiate this observation. A Western Ratsnake (*Pantherophis [Elaphe] obsoleta*) wrapped its coils around the neck of a Red-shouldered Hawk (*Buteo lineatus*) in Texas and nearly killed the predator instead (Williams, 1951). In separate events in Florida and Massachusetts, Eastern Ratsnakes incapacitated Great Horned Owls (*Bubo virginianus*) by coiling around them (Forbush, 1927; Grimes, 1936). Perry et al. (2001) described mutual mortality of a Great Horned Owl and a Southern Black Racer (*Coluber constrictor priapus*) in Arkansas. Alynda Angstadt (pers. comm.) observed a *C. constrictor* incapacitate a Red-shouldered Hawk in Gloucester County, Virginia, on 1 September 2001, but in this case, the rangers at the park killed the snake to free the hawk. The Red-tailed Hawk in the predatory encounter documented here was an immature animal (B. Watts, pers. comm.). Its lack of experience as a snake predator undoubtedly contributed to its being overpowered by the ratsnake. Our observation in the Norfolk Botanical Gardens is the first published record in the Virginia literature of attempted predation resulting in an apparent stalemate for both predator and prey.



Fig. 1. Attempted predation by an immature Red-tailed Hawk (*Buteo jamaicensis*) on an adult Eastern Ratsnake (*Pantherophis alleghaniensis*) in the City of Norfolk, Virginia (photograph by G. Fischer).

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- COMMON RINGLET (*COENONYMPHA TULLIA*), A NON-NATIVE BUTTERFLY NEW TO THE VIRGINIA FAUNA.—There is an ever-growing body of literature documenting the adverse impacts of exotic (non-native) species on native floras and faunas around the world (e.g., Drake et al., 1989; Rodda et al., 1997; Mack et al., 2000; Mack & Lonsdale, 2001; Stohlgren et al., 2003; Brockerhoff et al., 2006; Strayer et al., 2006). This has prompted the formation of invasive species councils and databases at both the national (see U.S. Department of Agriculture, 2008) and state levels (including Virginia).
- The known macrolepidopteran fauna of Virginia, comprised of approximately 1,300 species of butterflies, skippers, and (mostly) macromoths, includes only a half dozen or so species that are not native to the state. The most ubiquitous of these is the Cabbage White (*Pieris rapae*), a European import that has been present in the state since at least the 1870s (Clark & Clark, 1951), is a pest of cabbage and related vegetables, and can be extremely abundant (e.g., Taber [2003] reported that more than 33,000 adults were estimated to have been observed during a recent Fourth of July butterfly count on the Eastern Shore of Virginia). The European Skipper (*Thymelicus lineola*) was first recorded in Virginia in 1968 (Straley, 1969); it now occurs throughout the northern and western parts of the state, having expanded its range southward since its accidental introduction into Ontario in 1910 (Opler, 1998). This species is occasionally a pest of timothy grass (*Phleum pratense*), an agricultural crop.
- Among the macromoths, the Gypsy Moth (*Lymantria dispar*), yet another European import, was first recorded in Virginia around 1980 and is a well-known pest whose voracious larvae consume upwards of 178,000 ha (440,000 acres) of tree leaves (primarily